

## Barley *Hordeum vulgare* Technical Note F26

Management level	★★★★
Yield	★★★★
Quality	★★★★★
Water use efficiency	★★★★★
Reliability	★★★★
Versatility	★★★★★

Where ★★★★★ is the highest rating.

### Varieties

Primarily bred for grain, e.g. at Warwick –fitzroy, Gairdner, grimmitt, mackay, grout, hindmarsh, shepherd, Dictator II. However, in the last 10 years there has been increased use of barley for silage and hay production. Primary selection is for disease tolerance, e.g. yellow dwarf virus, and leaf rust. More frost hardy than wheat.

### Establishment

Plant late May to July at 50 - 80 kg seed /ha to achieve 120 plants/m<sup>2</sup>). Aim for a seed depth of 5 - 7 cm into moisture with a row spacing of 17.5 to 36 cm. Increase seeding rate on heavy clay soils by 30%. Use pre emergent herbicide to decrease competition from weeds.

Relatively rapid growth makes it suited to double cropping/early grazing.

### Water use

High water efficiency relative to other cereals. Water extraction to more than 80cm.

### Nutrient requirements

Nutrient requirement	N	P	K
Nutrient (% DM)	1.8	0.26	1.6
kg applied (/ha)	180	26	160

*Typical mineral content of barley at time of silage harvest and requirements to produce 10 t DM/ha yield.*



### Diseases

Leaf and root fungal diseases, yellow dwarf virus. Select tolerant varieties. Rotate with wheat or legumes. Avoid very early or late crops. Incidence of leaf diseases is reduced if crops are grazed.

### Growth and grazing

Expected yield between 6 - 11 t DM/ha, up to 14 t DM/ha silage crop can be achieved when nutrients and water are not limiting. 1st grazing at 6 - 8 weeks, ensure plants are well anchored, should correspond to a crop height of 20 - 25 cm height. Recommended that subsequent grazings occur before stem elongation.

Primary growth period July to October inclusive. Growing point just above top node, tiller will not recover if removed.

### Animal health

Nutritional scours often occurs but with no reduction in animal production. Potential for hypomagnesemia, nitrite and hypocalcaemia. Avoid grazing varieties with large awns.

## Nutrient quality

Quality (% DM)	Average	Min	Max
Crude protein	11.5	6.5	16.8
Starch	15.8	0.2	30.6
Sugar	9	1.2	22.8
NDF	49.5	37.7	63.3
Fat	3.3	2.3	4.7
ME (MJ/kg DM)	10	8.1	13.3
DM (%)	35.8	23.0	50.6

*Range in forage quality for barley silage*

## Silage

To maximise yield, harvest at mid dough stage although quality will be lower (7%CP, 9ME). If preference is for high quality silage, harvest at boot stage but expect yields to be 50% lower.

## Further information

Contact the DAFF Customer Service Centre by Phone 13 25 23, or Email [callweb@daff.qld.gov.au](mailto:callweb@daff.qld.gov.au)

More technical notes can be found at: [www.dairyinfo.biz](http://www.dairyinfo.biz)

Kaiser *et al.* (2003). TopFodder; Successful Silage

Barley planting and disease guide 2013 Qld NNSW.

Hennessy and Clements (2009) Cereals for grazing.

Callow *et al.* (2013) Successful Dairy Production in the Sub-Tropics

The project is funded and supported by the Department of Agriculture, Fisheries and Forestry and Dairy Australia.

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